U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2004-198-EA

CASEFILE/PROJECT NUMBER (optional): COC 060755 well# 299-23-3
COC 060756 well# 299-26-2
COC 060757 well# 299-27-4 and #299-27-3
COC 068206 pipeline

PROJECT NAME: Riata/ROC 4 APD's, associated pipelines, processing plant location

LEGAL DESCRIPTION:

The proposed well pad locations are:

Sixth Principal Meridian, Colorado
T. 2S, R. 99W, sec 23 NWSW (299-23-3)
T. 2S, R. 99W, sec 26 NWNW (299-26-2)
T. 2S, R. 99W, sec 27 NESE (299-27-3)
T. 2S, R. 99W, sec 27 SWSW (299-27-4)

The locations of the pipeline and plant are as follows:

Sixth Principal Meridian, Colorado
T. 2S., R. 98W.
sec. 18, S½SE¼,
T. 2S., R. 99W,
sec. 17, SE¼SE¼,
sec. 20, NE¼NE¼,
sec. 21, SW¼NE¼, W½NW¼, SE¼NW¼,
sec. 22, S½ SW¼,
sec. 23, S½SW¼,
sec. 24, S½ SE¼,
sec. 26, W1/2NW¼, NW¼SW¼,
sec. 27, NE¼, E½SW¼, NW¼SE¼, SE¼SE¼,
sec. 34, N½NE¼, SW¼NE¼

APPLICANT: Riata Energy, Inc. and ROC Oil Company (an affiliate of Riata Energy)

ISSUES AND CONCERNS (optional): EA 04-164, which was the APDs submitted by Riata, was combined with the pipelines for analysis in EA 04-198.

Onsite for pipeline and plant site was completed Sept. 8; onsite for the wells was completed September 14.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action: Riata Energy, Inc. is proposing to drill four well locations with associated access roads, pipelines and a processing plant.

For well #23-3 there is 0.1 miles access at 50' wide (.60 acres), the pipeline will be laid outside the borrow ditch during construction of the access road and will not require any additional space for construction of the pipeline allowing 50' for the total width requested for both actions. The location size will be approximately 350' X 240' (1.93 acres). Total disturbance for this location will be **2.53 acres**.

For well #26-2 there is 0.1 miles access at 50' wide (.60 acres), the pipeline will be laid outside the borrow ditch during construction of the access road and will not require any additional space for construction of the pipeline allowing 50' for the total width requested for both actions. The location size will be approximately 350' X 240' (1.93 acres). Total disturbance for this location will be **2.53 acres**.

For well #27-4 there is 0.3 miles access at 50' wide (1.82 acres), the pipeline will be laid outside the borrow ditch during construction of the access road and will not require any additional space for construction of the pipeline allowing 50' for the total width requested for both actions. The location size will be approximately 350' X 240' (1.93 acres). Total disturbance for this location will be **3.75 acres**. At the request of the WRFO wildlife biologist during the on-site inspection, this location was moved slightly to minimize pad involvement with a small (<1 acre), isolated stand of mature pinyon-juniper.

For well #27-3 there is 108 feet access at 50' wide (.12 acres), the pipeline will be laid outside the borrow ditch during construction of the access road and will not require any additional space for construction of the pipeline allowing 50' for the total width requested for both actions. The location size will be approximately 350' X 240' (1.93 acres). Total disturbance for this location will be **2.05 acres**. At the request of the WRFO wildlife biologist during the on-site inspection, this location was moved to lie adjacent and south of RBC 68. In the interest of maximizing the continuity and integrity of this sagebrush stand as future sage-grouse habitat, this move helps consolidate activity along a major access corridor and places new developments on a relatively narrow stringer of habitat separated from the stand's core by the road.

Total disturbance for well locations, access roads and pipelines ties will be approximately **10.86 acres**.

13 point surface use plan summary for the four APDs is as follows:

Improvements to existing roads will not be necessary. Existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well. Water bars and water dips will be constructed as needed along the access route. One 18" culvert will be installed where the new access approach leaves the county road. No low water crossings will be necessary. No cattle guards will be necessary. The need for surfacing material is not anticipated; however, if it is necessary due to inclement weather, then surfacing will be applied to the access road and well pad. Surface disturbance and vehicular traffic will be limited to the approved location and approved access route.

All permanent structures (onsite for 6 months or longer) constructed or installed (including oil well pump jacks) will be painted a flat, non-reflective, Juniper Green color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six-months of installation. Facilities required to comply with the Occupational and Safety Health act (OSHA) will be excluded.

Compaction and construction of the berms surrounding the tank batteries will be designed to prevent lateral movement of fluids through the utilized materials, prior to storage of fluids. The berms must be constructed to contain a minimum 110 percent of the storage capacity of the largest tank within the berm. All loading lines will be placed inside the berm. All portions of the pad not required for production operations will be reclaimed. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed. Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flow line will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced. A dike will be constructed completely around the production facilities (i.e. production tanks, water tanks, and/or heater treater). The dikes for the production facilities will be sufficiently impervious, made of a non-porous material and designed to contain one hundred and ten percent of the capacity of the largest tank. Any production pits will be fenced with at least four (4) strands of barbed wire and held in place by side posts and corner H-braces.

All access roads will be upgraded (crowned and ditched) and maintained as necessary to prevent erosion and accommodate year-round traffic. Any necessary reserve pits will be fenced to prevent wildlife entry. Pursuant to Onshore Order No. 7 water produced from this well may be disposed of in an unlined pit for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90 day period. In order to meet this deadline, an application for the proposed permanent disposal method should be submitted along with any necessary water analysis, in compliance with Onshore Order No. 7 as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90 day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut in order until an acceptable manner for disposing of said water is provided and approved by this office. The reserve pit will be properly backfilled and will not be used for production operations. Water will be pumped or hauled to the location along the approved access roads. No water wells are to be drilled. Surface and subsoil materials in the immediate will be utilized.

No construction materials will be removed from Federal lands. Where surfacing is needed for the access roads, it will be obtained from the spoils material in the reserve pit. Any materials to be used which are under BLM jurisdiction shall be approved in advance, as per CFR 3610.2-3. Drill cuttings are to be contained and buried in the reserve pit. Trash and garbage will be contained in a closed receptacle. Burning and/or burying is not authorized unless previously approved by the authorized Officer (AO) during winter conditions. Contents from trash receptacle will be hauled to an approved landfill. Reserve pit will evaporate or authorization for removal and disposal will be requested from the AO prior to backfilling the reserve pit. The salts and/or chemicals which are an integral part of the drilling system will be disposed of in the same manner as the drilling fluid. If a chemical porta-toilet is not furnished with the drilling rig, a sewage borehole will be used and its contents covered with a minimum of six feet of fill. If sewage holes are used, they will be covered and treated with lime.

The produced fluids will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas salt water or other produced fluids will be cleaned up and removed. Approximately 6 inches of topsoil will be stripped from this location and stockpiled at the site. A plastic pit liner will be installed in the reserve pit. It will be of sufficient mil to prevent seepage. Excavation of the reserve pit will require that one half of the fluid capacity is below the ground level. Reserve and produced water pits containing oily residue must be overhead flagged. These pits must be fenced with 28-inch, sheep tight mesh wire with two strands of barbed wire above and separated by approximately 6 inches. The reserve pit must be fenced on three sides during drilling; the fourth side must be fenced immediately after the rig is released. Berms will be required to keep water runoff out. A minimum of 2 feet freeboard will be maintained between the maximum fluid level and the top of the berm. In the event downhole operations threaten to exceed the required 2-foot freeboard, regarding reserve pit fluids, immediate notification will be provided to the AO with concurrent steps taken to minimize the introduction of additional fluids, until alternative containment methods can be approved. The reserve pits will be allowed to evaporate through one entire summer season (June-August) after drilling is completed, unless an alternate method of disposal is approved. After the fluids disappear, the reserve pit muds will be allowed to dry sufficiently to allow backfilling. The backfilling of the reserve pit will be completed within 30 days after conditions exist and will meet the following requirements:

- Backfilling will be done in such a manner that the muds and associated solids will be confined to the pit and not squeezed out and incorporated into the surface materials.
- There will a minimum, of 5 feet of cover (overburden) on the pit.
- When the work is completed, the pit area will support the weight of heavy equipment without sinking and over time shall not subside over 6-inch depth.

Reclamation will be done as requested by the BLM. In the event a producing well is completed, the unused areas of the well location will be recontoured to appropriate configuration (that allows lease operations and alleviates steep cut and fill slopes, minimizing accelerated erosion). Some of the stockpiled topsoil will be redistributed over the unused area and seeded with approved seed mixture. This will be done in the fall season after proper backfilling of the reserve pit has occurred. A seed mixture will be provided by the BLM in the Conditions of Approval. In the event of a dry hole, the location will be recontoured to the original grade, top

soiled, seeded with approved seed mixture. The stockpiled brush and topsoil will be evenly distributed over the location. All pits, cellars, rat holes, and other bore holes unnecessary for further lease operations excluding the reserve pit, will be backfilled immediately after the drilling rig is released. Pits, cellars and/or bore holes that remain on location must be fenced as specified for the reserve pit. Control of noxious weeds will be required through successful vegetation establishment and/or herbicide application. Applications of the herbicide are prescribed; however, it is the responsibility of the lease operator to insure compliance with the local, state, and Federal laws and regulations, as well as labeling directions specific to the use of any given herbicide.

The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days, the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places,
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming *in situ* preservation is not necessary),
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

A Class III survey has been conducted by Grand River Institute. No significant cultural resources were found and clearance has been recommended.

All state and local permits required for proposed operations will be obtained prior to commencing any activity that may be affected by such authorization.

ROC Gas Company Pipelines

ROC Gas Company, an affiliate of Riata Energy, proposes to construct and operate a pipeline connecting current and future wells to the Questar pipeline, with an associated plant and facilities.

a) ROC Gas is requesting a pipeline right-of-way approximately 9.5 miles in total length with a permanent easement 30 feet in width. The proposed pipelines include five gathering lines that will carry unprocessed gas from Riata Energy's gathering field to ROC Gas's proposed processing plant, and one processed gas pipeline that will carry processed gas from ROC Gas's processing plant to an interconnect with Questar or CIG. The route crosses BLM and fee-lands.

b) Related structures will be located along the right-of-way as necessary. These structures include a processing plant, compression station, valves, pigging facilities, cathodic protection equipment, and related aboveground appurtenances.

c) The proposed right-of-way includes approximately 0.75 miles of up to 8-inch diameter, 4.42 miles of 8-inch diameter, and 5.04 miles of 10-inch diameter surface or buried natural gas pipeline, and are split into five segments of approximately 14,100 feet (2.67 miles), 5,050 feet (0.96 miles), 3,700 feet (0.70 miles), 7,700 feet (1.46 miles), and 19,400 feet (3.67miles). The pipelines will be API 5L X-42 and API 5L X-52 steel pipelines.

d) Estimated volume for each pipeline has not yet been determined, but current projected total gas volumes are between 25 MMscfd and 75 MMscfd.

e) The proposed construction schedule is fourth quarter 2004 and will require 16 to 20 weeks to complete. In addition to the 30-foot permanent right-of-way, a 20-foot temporary construction right-of-way will be required.

f) At the request of the WRFO wildlife biologist during the on-site inspection, slight deviations in processed gas pipeline alignment were flagged through old-growth pinyon-juniper stands to minimize the involvement of large trees. The northern end of the processed gas pipeline was shifted to the east $\leq$100 feet and right-of-way clearing along this ridge will be reduced to $\leq$25 feet, actions taken by the project proponent to avert about 1400 feet of old-growth juniper. These realignments were made in the interest of minimizing alterations in the extent and character of mature woodland stands that offer important elements of sensitive species habitat (e.g., bat roosts and goshawk nesting).

g) Due to the changes made in re-routing and correct mapping, the final disturbed areas will be: 30 feet wide for 32,414 feet in length (22.32 acres); 25 feet wide for 1400 feet in length (0.80 acres); and the plant site (10.00 acres). The total acreage encumbered by the permanent right-of-way will be 33.12 acres, more or less. A temporary construction width of 25 feet wide and 32,414 feet long is granted, containing an additional 18.60 acres of encumbrance for a total disturbed area of 51.72 acres for the ROC pipeline and plant.

ROC Gas Processing Plant

a) The processing plant will be used to process gas in order to recover natural gas liquids from the gas and to meet carbon dioxide specification for the gas gathered from the Piceance Basin. Preliminary design includes amine treatment to reduce carbon dioxide volume content, glycol dehydration to remove water, and propane refrigeration processing for natural gas liquids recovery. An alternative would be the use of a membrane system instead of the amine treatment. The facility will be used year-round for natural gas processing.

b) The facility will be supplied with up to 5,500 horsepower discharge compression in order to feed into various pipeline systems in the area, as needed. The compression may be electric or gas driven. The processed gas will ultimately be delivered into a pipeline operated by

Questar or CIG. Estimated throughput of the facility is approximately 25 MMscfd with a maximum throughput of 75 MMscfd.

c) A maximum of approximately 10 acres of land will be required. A 30-year term is requested for the facility site.

d) No temporary use areas are requested at this time. The proposed construction schedule is during the fourth quarter of 2004 and will require 16 to 20 weeks to complete.

e) At the request of the WRFO wildlife biologist, the compressor facility's fans would be oriented to the east or north to reduce noise levels transmitted toward the large sagebrush park that will ultimately be reoccupied by sage-grouse.

Preconstruction, Construction, Post-construction, and Mitigation

The Construction, Operation, and Maintenance Plan submitted with the application as Exhibit A becomes a part of this application.

No Action Alternative: If these actions are not authorized, additional environmental impacts would not be expected.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: Changes were made to the original proposal to mitigate environmental impacts. New maps were submitted and the changes were incorporated into the proposed action.

NEED FOR THE ACTION: To respond to the request by applicant to exercise lease rights and develop hydrocarbon reserves.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-5

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

Decision Number/Page: Pages 49-52

Decision Language: "To make public lands available for the siting of public and private facilities through the issuance of applicable land use authorizations, in a manner that provides for reasonable protection of other resource values."

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: There are no special air quality designations or non-attainment areas in the vicinity of the proposed action.

Environmental Consequences of the Proposed Action: The proposed action would result in short term, local impacts to air quality during and after construction, due to dust being blown into the air. However, airborne particulate matter should not exceed Colorado air quality standards on an hourly or daily basis.

Environmental Consequences of the No Action Alternative: Impacts are not anticipated from the no-action alternative.

Mitigation: Applicant will spread water on road surfaces to control fugitive dust during construction and continue on an as needed basis for the life of the wells.

CULTURAL RESOURCES

Affected Environment: For well# 299-23-3, access road and well tie. The proposed well pad, access from the county road and well tie to the road have been inventoried at the Class III (100% pedestrian) level (Conner 2004, Compliance Dated 11/12/2004) with no new cultural resources identified in the area inventoried.

Well# 299-26-2, access and well tie pipeline. The proposed well pad, access from the county road and well tie to the road have been inventoried at the Class III (100% pedestrian) level (Conner 2004, Compliance Dated 11/12/2004) with no new cultural resources identified in the area inventoried.

Well# 299-27-4, access road and well tie. The proposed well pad, access from the county road and well tie to the road have been inventoried at the Class III (100% pedestrian) level

(Conner 2004, Compliance Dated 11/12/2004) with no new cultural resources identified in the area inventoried.

Well#299-27-3, access road and well tie. The proposed well pad, access from the county road and well tie to the road have been inventoried at the Class III (100% pedestrian) level (Conner 2004, Compliance Dated 11/12/2004) with no new cultural resources identified in the area inventoried.

ROC company pipelines and compressor: The proposed pipelines and compressor facility have been inventoried at the Class III (100% pedestrian) level (Conner and Davenport 2004, Compliance Dated 8/26/2004) including approximately 1400 feet or so that was rerouted to the northeast about seventy feet to avoid mature piñon forest at the northwest end of the pipeline where it is proposed to connect to Questar or CIG. The reroute only moved the pipeline approximately seventy to seventy-five feet. Inventory identified one isolated find (5RB 4810) at the compressor site location. The well tie pipeline to the 298-18-1 passes through a historic homestead and ranch.

Environmental Consequences of the Proposed Action: Well# 299-23-3, access road and well tie. The proposed well pad, access road and well tie pipeline will not impact any known cultural resources.

Well# 299-26-2, access road and well tie. The proposed well pad, access road and well tie pipeline will not impact any known cultural resources.

Well# 299-27-4, access road and well tie. The proposed well pad, access road and well tie pipeline will not impact any known cultural resources.

Well# 299-27-3, access road and well tie. The proposed well pad, access road and well tie pipeline will not impact any known cultural resources.

ROC pipelines and compressor: Provided the pipeline through the historic ranch facilities follow the existing road the proposed pipelines and compressor facilities will not adversely affect any known register listed or eligible cultural resources.

Environmental Consequences of the No Action Alternative: Under the no action alternative there would be no new well pads, compressor facilities or pipelines and there would be no new impacts to cultural resources.

Mitigation: For the wells (299-23-3, 299-26-2, 299-27-4 and 299-27-3) access roads and well ties: have been addressed in proposed action. No additional mitigation is necessary.

For the ROC pipelines and compressor: 1. When Riata/ROC develops the well tie pipeline for the existing well #298-18-1; disturbance should follow the existing road through the site to avoid impacts to any of the historic features of the site.

2. Pipeline construction on the northern 1400 feet, more or less, of the pipeline tie to Questar or CIG must keep the working width as narrow as is possible consistent with safety. Also, all disturbances on the northeast side of the line must be restricted to no more than twelve feet from the new, staked centerline route.

Additional mitigation measures are addressed in the proposed action.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The area of the proposed action has no known noxious weeds. The invasive annual cheatgrass is located in the borrow area of RBC Rd 68 and is scattered in the burn in Sec 27, T 2S R 99W.

Environmental Consequences of the Proposed Action: The proposed action will create 10.68 acres of earthen disturbance, providing safe sites for the establishment and proliferation of noxious weeds and cheatgrass. Application of the proposed mitigation will insure that there are no significant negative impacts as a result of the proposed action.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation of a relatively undisturbed landscape with no noxious weeds and stable plant communities.

Mitigation: Promptly recontour and revegetate all disturbed areas with Native Seed Mix #3 and eradicate all noxious weeds and invasive plants using materials and methods approved in advance by the authorized officer.

MIGRATORY BIRDS

Affected Environment: There are many species of migratory birds that utilize Wyoming big sagebrush and pinyon-juniper vegetative types to fulfill nesting activities within the proposed project area. These species, including several species identified as having higher conservation interest by the Rocky Mountain Bird Observatory, Partners in Flight program (e.g., Brewer's sparrow, green-tailed towhee, gray flycatcher, pinyon jay, juniper titmouse, black-throated gray warbler, and violet-green swallow) can generally be found during the months of May, June, and July within the proposed project area.

Environmental Consequences of the Proposed Action: Because the proposed action would occur outside of the nesting season (i.e., between November and April) there would be no impacts to the nesting activities of the species listed above.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to disrupt the breeding activities of migratory birds.

Mitigation: None.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no threatened or endangered animals known to inhabit or derive important benefit from the proposed project area.

Greater sage-grouse

Greater sage-grouse, a BLM sensitive species and recently petitioned for Endangered Species Act listing, historically occupied broad sagebrush ridgelines on Wolf Ridge (northern terminus of processed gas pipeline, T2S, R99W sections 16, 17, and 20) and on Dry Ryan Ridge (sites of gas processing plant and well pad 27-3; T2S, R99W, section 27). No sage-grouse are known to have occupied these areas since the mid-1980's because of advanced community succession (i.e., pinyon encroachment/serviceberry development on Wolf Ridge) or wildfire (i.e., only trace sagebrush redevelopment on Dry Ryan), but these habitats remain available for natural re-colonization or species recovery actions in the future (likely within 10 years).

Townsend's big-eared bat, and fringed and Yuma myotis

BLM-sensitive Townsend's big-eared bat, and fringed and Yuma myotis occupy a broad array of habitats in the West, and limited collections have documented their presence from western Colorado's semi-desert shrublands and woodlands. The Yuma myotis and Townsend's big-eared bat, in particular, are often closely associated with riparian communities and permanent sources of water. Relatively extensive and persistent riparian communities are available in Yellow Creek (10 miles northeast), Black Sulphur Creek (4 miles southeast), and Big Duck Creek (6 miles northwest). The fringed myotis is more common in upland sage-steppe and xeric woodlands, including pinyon-juniper.

Foraging habitat for the Yuma myotis includes edge habitats along streams and adjacent to and within a variety of wooded habitats where they forage primarily on flying aquatic insects. The fringed myotis and Townsend's big-eared bat more consistently use forested habitats for roosting and foraging. Over 90% of big-eared bat's diet is composed of moths. Consistent with its preferential use of uplands, the presence of non-flying invertebrates in the diet of fringed myotis suggests a foraging style that relies at least partially on foliage gleaning. All these bats are capable of traveling long distances between roosts and foraging areas (up to 10 miles).

Birthing and the formation of maternity colonies for these species occurs from mid-spring through mid-summer; males tend to roost singly in the summer. The core distribution of bats tends to be strongly correlated with the availability of caves, cave-like roosting habitat (e.g., mines), and buildings for night, maternity, and hibernation roosts, but these species have been found using rock crevices and trees. Bats roosting in woodland habitats use live and dead trees, roosting under loose exfoliating bark, in cavities, or vertical cracks-attributes best served by mature large-diameter pinyon and juniper trees.

Although the project area is likely to support small numbers of bats (especially solitary males) during the summer months, abundance is likely constrained by the paucity of maternity and hibernation roost habitat that could be expected to harbor large numbers of bats (e.g., caves, mines, buildings). The nearest geology conducive to the formation of caves is 30 or more miles

to the east and north of the project area. Rock outcrops and mature pinyon-juniper woodlands, representing potential roost substrate for small numbers of bats, are widely available in the project area.

Northern goshawk

The northern goshawk (hereafter referred to as goshawk) is a forest raptor generally associated with mature mixed-deciduous and coniferous forests. Use of pinyon-juniper woodlands by goshawk for nesting has been widely documented in the West, but their contribution to goshawk distribution, abundance, and population viability is of small consequence. A number of studies and surveys attribute little if any potential to pinyon-juniper woodlands for goshawk nesting. The goshawk is a relatively rare breeding species in this Resource Area. Summering birds are most commonly observed at higher elevations (>7100') where Douglas-fir occur as pure stands or as smaller inclusions among pinyon-juniper woodlands. However, over the last 30 years 3 nests have been found in mature mid-elevation pinyon-juniper woodlands as low as 6500'. Based on these few instances, goshawks appear to choose large contiguous tracts of mature, interior woodlands for nesting. One active nest has been located in a small residual stringer of trees in an extensive woodland chaining.

The proposed project area encompasses woodland inclusions that could support goshawk nesting activities, though no goshawks were observed or evidence of goshawk nesting activity found during raptor surveys conducted by BLM biologists in the summer of 2004.

Environmental Consequences of the Proposed Action: On-site surveys identified about 500 feet of old-growth pinyon-juniper woodlands in 3 parcels (about 0.7 acre total) that would be bisected along the proposed processed gas pipeline. These sites were invariably located on short southeast facing slopes. Slight deviations in pipeline alignment were flagged through these old-growth areas during on-sites to minimize the involvement of larger diameter trees and avoid substantive modifications to current canopy character. In addition, the northern 3500 feet of the processed gas pipeline was shifted to the east during on-sites and right-of-way clearing along this ridge will be reduced to ≤25 feet, actions taken by the project proponent to avoid an uncommon concentration of old-growth ridgeline junipers (about 1400 feet). Because of the small size and dispersed nature of the affected areas, effects to species generally associated with old-growth pinyon-juniper woodlands, including special status bats and goshawk, would be discountable.

Long-term clearing and industrial occupation of sagebrush habitats ultimately suitable for sage-grouse would be relatively small in extent, located along an existing county road corridor, and confined to the margins of the sagebrush type (i.e., 10-acre plant site, 2-acre 27-3 pad, 0.25-acre access to 27-4). As conditioned (i.e., vehicle deterrents), an additional 3 acres of clearing attributable to the processed gas pipeline would redevelop suitable habitat character in the shorter term. Although these developments represent incremental reductions in the effective extent of suitable sagebrush habitats, as proposed and conditioned, the continuity and integrity of the larger sagebrush park for near-term reoccupation by sage-grouse would not be substantially altered.

Environmental Consequences of the No Action Alternative: No immediate action would be authorized that would involve the adverse modification of mature pinyon-juniper woodlands as potential nest or roost habitat for northern goshawk and special status bats.

Mitigation: Integral with Proposed Action.

Finding on the Public Land Health Standard for Threatened & Endangered species: The area potentially influenced by the proposed and no-action alternatives does not currently support habitats associated with listed animal species, therefore, neither alternative would influence the applicable rangeland health standards.

Although not currently capable (in the case of sage-grouse) or marginally suitable (bats and goshawk) in support of BLM sensitive animals, the area potentially influenced by the proposed action currently meets applicable land health standards. Although long-term occupation of sagebrush habitats on Dry Ryan Ridge is expected to result in minor depression of future habitat capacity for sage-grouse, the proposed action would have no substantive influence on the greater habitat core and, on a landscape scale; its implementation would not interfere with continued meeting of the land health standards. Conditions of approval applied to the proposed action would effectively maintain habitat character important to those species associated with mature pinyon-juniper woodlands, and in so doing, the proposed action is consistent with continued meeting of the land health standards.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: At the elevations encountered in the project area, three SSS plants are likely to occur: *Lesquerella congesta* (Dudley Bluffs bladderpod), *Physaria obcordata* (Piceance twinpod), and the *Lesquerella parviflora* (Piceance bladderpod). The entire pipeline and proposed plant and well locations were inventoried on August 30th and 31st, 2004. The dominant surface geology is the Uintah Formation which is not suitable habitat for any SSS plants in the area. A small band of light gray colored shale 200 feet thick was encountered about half way down the west slope of Ryan Gulch. The light colored band resembles outcrops of the Green River Shale and was inventoried 200 feet either side of the proposed flagged line for the pipeline routes.

Environmental Consequences of the Proposed Action: Since neither SSS plant species nor suitable habitat for these plants was found, no specific measures for avoidance or mitigation is recommended. This project is unlikely to have any impact on SSS plants.

Environmental Consequences of the No Action Alternative: None

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The table below correlates the proposed well locations to the specific drainages they are in. Stakes Springs is a tributary to Yellow Creek while Ryan Gulch is tributary to Piceance Creek. Both Yellow Creek and Piceance Creek are tributary to the White River.

Proposed Action	Drainage Name
299-26-2	Ryan Gulch
299-27-4	Ryan Gulch
299-23-3	Stakes Spring
299-27-3	Stakes Spring
Gas Plant	Stakes Springs
ROC Pipeline	Stakes Springs/Ryan Gulch

Historic hydrologic data is available for Stake Springs. USGS had a gaging station at the mouth of Stake Springs from 1976-1977. The table below reflects the data collected during this time frame. Typical of ephemeral drainages, Stake Springs flows as a result of winter snowmelt and late summer thunderstorms. For the two years of record, only one of the spring runoff periods recorded flow while the recorded peak flow was a late summer rainstorm. The range of discharge was from dry on most days to a peak flow of 245 cubic foot per second (cfs) on September 11, 1977. Water quality for the periods of flow is very good showing low conductivities and representative pH values. These samples are well with in the standards set by the State. Stake Springs is identified in segment 13b, which is the mainstem of Yellow Creek, including all tributaries from the source to the confluence with the White River.

USGS Gaging Station 09306230 Stake Springs Gulch near Rangely, CO						
Sample Date & Time		Temperature, water, deg C	Daily Streamflow (ft^3/s)	Instantaneous discharge cfs	Specific Conductance, 25 degC	pH, std units
2/12/1976	16:10	1	0.04	0.03	180	
2/13/1976	14:00	3	0.01	0.02	280	8.4
	15:40	1	0.34	0.14	650	
9/11/1977				245		
9/12/1977	11:45			0.01	602	

The State has designated this segment as "Use Protected". They further classified this stream segment as Warm Aquatic Life 2, Recreation 2, and Agriculture. The State has further defined water quality parameters with table values. These standards reflect the ambient water quality and define maximum allowable concentrations for the various water quality parameters. The anti-degradation rule does not apply to segments that are considered to be use protected. For these drainages, on the parameters listed in the table apply.

Hydrologic data is not available for Ryan Gulch. Typically these upper tributaries are ephemeral streams flowing in direct response to snow melt and rain storms. Water quality of precipitation is well within the standards set by the State. Ryan gulch is identified in segment 16, which is tributaries to Piceance Creek, including all wetlands, lakes and reservoirs from the source to the confluence with the White River except for specific listings in segments 17-20. The State has classified this segment as a "Use Protected" reach. Its designated beneficial uses are: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegredation review requirements in the Antidegredation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For this reach, minimum standards for three parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 2000/100 ml, and 630/100 ml E. coli.

Environmental Consequences of the Proposed Action: Impacts to water quality from development of these wells would be similar to other surface disturbing activities. Some of these impacts would be exposure of soil surface to wind and water erosion, reduced water quality due to erosion of sediment and salt off roads, drill pads, and pipeline rights of ways, and piping or rill erosion where well pads and roads are exposed to climatic elements.

Depleting the vegetation cover needed to protect watersheds from raindrop impact and runoff could cause short-term erosion problems and increased sedimentation to the White River watershed until successful mitigation has been implemented and proven to be successful. The magnitude of these impacts is dependent on the amount of surface disturbance and climatic conditions during the time the soils are exposed to the elements. These impacts would be short term until revegetation has occurred.

Mitigation such as revegetation of the unused portion of the well pad as soon as possible, placing gravel on areas that would not be revegetated or placing check dams to control runoff from the access road and pad would help to minimize these impacts.

Environmental Consequences of the No Action Alternative: Impacts are not anticipated from the no-action alternative.

Mitigation: Oil and Gas operations are considered to be a light industrial activity by the Colorado Department of Public Health and Environment. As an industrial discharger, the applicant is required to obtain a permit authorizing the discharge of stormwater from these sites. The permit requires development of a stormwater management plan showing how BMPs would be used to control runoff and sediment transport.

When preparing the site, all suitable topsoil should be stripped from the surface of the location and stockpiled for reclamation for use, once the drilling is completed.

All sediment control structures or disposal pits will be designed to contain a 100-year, 6-hour storm event. Storage volumes within these structures will have a design life of 25 years.

All activity shall cease when soils or road surfaces become saturated to a depth of three inches unless otherwise approved by the Authorized Officer.

Provide vegetation or artificial stabilization of cut and fill slopes in the design process. Avoid establishment of vegetation where it inhibits drainage from the road surface or where it restricts safety or maintenance.

Eliminate undesirable berms that retard normal surface runoff.

Finding on the Public Land Health Standard for water quality: Water quality in the stream segments within the area of the proposed action meet the criteria established in the standard. With successful reclamation, the proposed action would not change this status.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: There are no wetlands or riparian zones potentially influenced by the proposed or no-action alternatives. The nearest persistent water is Black Sulfur Creek, about four miles southwest of the project site.

Environmental Consequences of the Proposed Action: The proposed action would have no influence on downstream channel systems.

Environmental Consequences of the No Action Alternative: The no-action alternative would have no influence on downstream channel systems.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Because there are no wetlands or riparian zones potentially influenced by the proposed or no-action alternatives, a land health standard finding is

not relevant. The proposed and no action alternatives would have no measurable influence on wetlands or riparian zones associated with downstream systems.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Baseline soils data have been collected for Rio Blanco County by the Natural Resource Conservation Service (NRCS) and are published in an order III Soil Survey. This survey is available for review from the White River Field Office. The table below identifies soil characteristics for the soils encountered from the proposed action.

Proposed action	Soil Name	Slope	Ecological site	Salinity	Run Off	Erosion Potential
APD 299-23-3;	Forelle loam	3-8%	Rolling Loam	<2	Medium	Moderate
APD 299-27-3; ROC Pipeline	Piceance fine sandy loam	5-15%	Rolling Loam	<2	Medium	Moderate to high
APD 299-26-2; Gas Plant; ROC	Redcreek-Rentsac complex	5-30%	PJ woodlands/PJ woodlands	<2	Very high	Moderate to high
APD 299-27-4; ROC pipeline	Rentsac channery loam	5-50	PJ woodlands			

Revegetation limitations for these soil types include alkalinity, an arid climate, and droughty soil condition. There are no special designations for the areas of the proposed action.

Environmental Consequences of the Proposed Action: General impacts associated with oil and gas and road development include but are not limited to, loss of topsoil, soil compaction and possible increase in sediment loads to the White River. The primary surface-disturbing impact would be a potential increase in sediment transport from runoff events after the protective vegetative cover has been removed.

BLM would prefer to have a low water crossing if permissible then to use the proposed culvert. Flashy storm events have a tendency to clog culverts with brush and sediment; diverting runoff around the culvert and requiring continual maintenance to keep them functioning.

Environmental Consequences of the No Action Alternative: New impacts would not occur as a result of the no-action alternative.

Mitigation: BLM would prefer to have a low water crossing. If Riata chooses to place a culvert in the access road the following mitigation will apply:

- Culverts will be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.

- Approaches to the culvert will be stabilized with fabric /gravel/water bars as needed to reduce erosion.

In addition, the following conditions of approval from Appendix B, White River ROD/RMP must be applied:

Water bars or dikes shall be constructed on all of the rights-of-way, and across the full width of the disturbed area, as directed by the authorized officer.

Slopes within the disturbed area shall be stabilized by non-vegetative practices designed to hold the soil in place and minimize erosion. Vegetative cover shall be reestablished to increase infiltration and provide additional protection from erosion.

When erosion is anticipated, sediment barriers shall be constructed to slow runoff, allow deposition of sediment, and prevent it from leaving the site. In addition, straining or filtration mechanisms may also contribute to sediment removal from runoff

All disturbed areas including the cut and fill slopes not necessary for production will be promptly recontoured and revegetated using the recommended seed mix in the Vegetation section below.

Finding on the Public Land Health Standard for upland soils: Site specifically, these soils would probably not meet the Land Health Standards because of the presence of some indicators (i.e. rill erosion, and actively-eroding gullies), on a temporary basis. This condition would exist until successful reclamation has occurred. Based on the overall landscape, the Land Health Standards would not be affected.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Proposed well locations 299-23-3, 299-26-2 are located in parks dominated by Wyoming big sagebrush with a diverse understory of grasses and forbs. Location 299-27-3 is located in a burned area which previously was a park dominated by mixed Wyoming

and mountain big sagebrush. This burned area is dominated by perennial grasses and forbs with some low rabbitbrush. Location 299-27-4 is located in pinyon-juniper woodland at the edge of the previously mentioned burned area. The pipelines and access roads traverse both pinyon-juniper and the aforementioned Wyoming big sagebrush parks.

Environmental Consequences of the Proposed Action: The net effect of these four wells combined with the previous Riata wells will be the transformation of a presently pastoral landscape with stable, intact plant communities into a developed landscape with fragmented plant communities. This action will reduce the utility of the affected plant communities and their components for all wildland users with the possible exception of livestock.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation of relatively undisturbed, intact plant communities.

Mitigation: Promptly revegetate all disturbed areas including all cut and fill slopes and topsoil stockpiles with Native Seed mix #3. Seeding rates are PLS (Pure Live Seed) and apply to drill seeding. For broadcast application, double the seeding rate and then harrow to insure seed coverage. The project applicant will be responsible for eradicating cheatgrass and noxious and problem weeds should they occur as a result of the proposed action. The applicant will use materials and methods authorized in advance by the White River Field Manager.

Native Seed Mix # 3 lbs/PLS		
Western wheatgrass (Rosanna)	2	Gravelly 10"-14",
Bluebunch wheatgrass (Secar, Whitmar)	1	Pinyon/Juniper
Thickspike wheatgrass (Critana)	1	Woodland, Stony
Indian ricegrass (Rimrock)	2	Foothills, 147
Needle and thread	1	(Mountain
Fourwing saltbush (Wytana)	1	Mahogany)
Utah sweetvetch	.5	
Alternates: globemallow		

Use seed that is certified and free of noxious weeds. Seed certification tags must be submitted to the Area Manager within 30 days of seeding.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Upland plant communities in the project area currently meet the Standard and will marginally meet the Standard in the future with implementation of the proposed action.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: There are no aquatic habitats potentially influenced by the proposed or no-action alternatives. The nearest persistent water is Black Sulfur Creek, about four miles southwest of the project site.

Environmental Consequences of the Proposed Action: The proposed action would have

no influence on downstream channel systems.

Environmental Consequences of the No Action Alternative: The no-action alternative would have no influence on downstream channel systems.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Because there are no aquatic habitats or animals potentially influenced by the proposed or no-action alternatives, a land health standard finding is not relevant. The proposed and no action alternatives would have no measurable influence on aquatic habitats associated with downstream systems.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: Big game

The project area includes mixed shrub and pinyon-juniper woodlands that are classified by the Colorado Division of Wildlife as general winter range. Seasonal use by deer and elk occurs primarily during the spring and fall migration periods from September through late December and from mid April through mid May.

Raptors

Mature stands of pinyon and juniper found within the project area may provide suitable nesting habitat for certain species of raptors (e.g., sharp-shinned hawk, Cooper's hawk, northern goshawk, and red-tailed hawk). Raptor surveys were conducted by proponent-contracted wildlife biologists in late August 2004; a total of 9.5 miles of pipeline and the 10-acre compressor site were surveyed within the proposed project area. No raptor nests were found during these surveys.

Environmental Consequences of the Proposed Action: Predominant big game use of the project area occurs outside the projected construction timeframes. Short-term effects to local deer and elk herds may include displacement of individuals during construction of the compressor station and during installation of the pipeline; however, no long-term effects to seasonal distribution or movement are expected. Although compressor station operation and maintenance would be long term, activities would be consistent and of low intensity—attributes to which big game acclimates sufficiently such that no effective reduction in habitat availability or use would be expected.

The project would have no measurable influence on the availability or utility of big game woody forage supplies in the project area. Much of the surface disturbance would occur in types whose utility is compromised by existing features (20 acres of road margins) or that support limited woody forage production (e.g., about 50 acres of pinyon-juniper encroached Wyoming big sagebrush, basin big sagebrush bottomlands, and pinyon-juniper woodlands). Short term reductions in the herbaceous forage base on about 70 total acres would be largely offset through reclamation by the following growing season. Long term loss of herbaceous production on up to

20 acres of permanent facility sites (not accounting for interim reclamation of pads) is considered minor.

Drilling operations would require about 0.5 mile of new access roads. These access roads would not expand the existing road network appreciably and their contribution to effective habitat loss (e.g., habitat disuse through avoidance) in the project area is considered negligible. Pipelines, which regularly support continued vehicle use and add substantially to local road densities, would be conditioned to effectively deter subsequent use.

The project proposal is slated for construction/installation between December 2004 and April 2005. Although surveys revealed no evidence of raptor nest activity in those areas potentially influenced by the proposed action, disturbances associated with the vegetation clearing and facility construction would be finalized by the time woodland raptors (e.g., long-eared owl, accipitrine hawks) begin nesting. Pipeline clearing would intersect about 3500 feet (about 5 acres) of woodlands with stature more conducive to raptor nesting use. Narrow and widely dispersed linear clearings that are made unavailable for further vehicle use are not considered an impediment to the integrity or suitability of woodland stands for subsequent nesting or foraging use by woodland raptors.

Environmental Consequences of the No Action Alternative: No immediate action would be authorized that would involve the adverse modification of terrestrial wildlife habitats.

Mitigation: 1.Areas of old-growth pinyon and juniper were identified within the project area during on-site surveys. To avoid potential impacts to species generally associated with mature pinyon-juniper woodlands, a 0.65 mile section of pipeline would be relocated to the east of the proposed route and the cleared right-of-way width narrowed not to exceed 25 feet. In addition, where identified during on-sites and when possible, mature pinyon and juniper trees would be avoided during construction activities.

2. To deter subsequent vehicle use of ROWs and minimize development of new roads and trails consistent with WRFO RMP land use decisions (ROD page 2-29), and after reclamation seeding has been finalized, woody material from trees cleared from the ROW would be evenly redistributed across that portion of the ROW adjacent to or that bisects woodland reaches. This is particularly relevant to the ridgeline in the SW ¼ of section 22 (T2S R99W) and those descents into Ryan Gulch (NW¼ section 26 T2S R99W and SE ¼ section 18 T2S R98W) and Right Fork Stake Springs Draw (NW ¼ section 21 T2S R99W). Woody material will also be placed along the processed gas pipeline as a means of effectively deterring subsequent vehicular use along the ROW in that portion of the sagebrush park in the northeast quarter of section 27, T2S, R99W.

3. Reclamation activities would include using available soil material to back-fill cut slopes. Disturbed areas would be seeded with the approved mix of perennial and annual forbs and grasses. Location of production facilities would promote interim reclamation.

4. The compressor fans would be oriented to the east or north to reduce potential impacts to deer and elk as a result of displacement due to noise disturbance.

5. Because the proposed action is scheduled to take place during the months of December through April in an area not regularly occupied by deer and elk during these timeframes, the application of timing limitations are not warranted.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The surrounding mixed-shrub and pinyon-juniper woodlands currently meet the rangeland health standards for resident wildlife. As conditioned, well pad, compressor and ROW construction would have no measurable influence on the utility or suitability of surrounding wildlife habitat and would not interfere with continued meeting of the standard.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management			X
Forest Management			X
Geology and Minerals			X
Hydrology/Water Rights	X		
Law Enforcement		X	
Paleontology			X
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses			X

ACCESS AND TRANSPORTATION

Affected Environment: Rio Blanco Road 68 will be affected by the proposed action.

Environmental Consequences of the Proposed Action: An increase in traffic can be expected while the well is in operation. The increase in heavy vehicle traffic during the construction phase of the pad may impact the surface quality of the road.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

FIRE MANAGEMENT

Affected Environment: The 299-27-4 well proposed involves approximately 0.3 miles of road and pipeline construction and about 1.93 acres of drill pad clearing for an approximate total of 3.75 acres of disturbance in pinyon/juniper stands.

The proposed pipeline transporting gas to the Questar pipeline traverses several pinyon juniper woodlands with significant fuel loading at approximately 10 tons/acre.

The National Fire Plan calls for "firefighter and public safety" to be the highest priority for all fire management activities. In the pinion, juniper, and brush types common on the White River Resource Area, roads and other man-made openings are commonly used as fuel breaks or barriers to control the spread of both wildland and prescribed fires. By reducing the activity fuels created from this proposal, future fire management efforts in this area should be safer for those involved and more effective.

The remaining wells are proposed in sagebrush parks or previously burned PJ woodlands and therefore do not present a hazardous fuel situation.

Environmental Consequences of the Proposed Action: Due to the existing tree cover of pinion and juniper, there will be a need for the operator to clear some of these trees. If not adequately treated, these trees will result in elevated hazardous fuels conditions and remain on-site for many years. These accumulations of dead material are very receptive to fire brands and spotting from wind driven fires and can greatly accelerate the rate of spread of the fire front. The road(s) associated with this project may be used by the general public for a variety of uses, including access for fire wood gathering, hunting and other dispersed recreational activities. Increased public use of an area will nearly always result in an increased potential for man-caused wildland fires. If not treated the slash and woody debris will create an elevated hazardous dead fuel loading which could pose significant control problems in the event of a wildfire. Additionally there would be greater threat to public, Riata/contractor personnel, and fire suppression personnel.

Environmental Consequences of the No Action Alternative: There would be no tree removal or disturbance to cause significant dead fuel loading.

Mitigation: The operator has two options for treatment of slash from the 299-27-4 location. A hydro-ax or other mulching type machine could be used to remove the trees. The machines are capable of shredding trees up to 12" in diameter and 15' tall as well as mowing brush like a conventional brush beater. It generally leaves small branches and pieces of wood from pencil size up to bowling ball size. The mulch is evenly scattered across the surface and the tires or tracks distribute the weight of the equipment. These would effectively breakdown the woody fuel and scatter the debris thereby eliminating any hazardous fuel load adjacent to the new road and well pad. The other option would be to cut trees and have them removed for

firewood, posts, or other products. The branches and tops should be lopped and scattered to a depth of 24 inches or less. If the products are left for collection by the general public, they should be stacked in small manageable piles along the roadside or pad to facilitate removal.

For the pipeline route, windrowed materials would be dragged and spread over the pipeline right-of-way following seeding, to prevent vehicular use. This would prevent accumulation of fuels which would create a fuels hazard.

FOREST MANAGEMENT

Affected Environment: Location 299-27-4 is located in pinyon-juniper woodland. This is a mature woodland composed of pinyon and Utah juniper. These woodlands locally provide firewood and fence posts. This stand is considered "commercial" under the current Land Use Plan. The other well pads and access roads are outside of pinyon/juniper woodlands.

Environmental Consequences of the Proposed Action: Under the proposed action 3.75 acres of woodland would be removed with the construction of the #27-4 well pad and access road. The harvest of this area would be considered within the decadal harvest level for the Piceance Geographic Reference Area.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: Location 299-27-4 would be cleared as specified in the Fire Management section described above.

For the pipeline route, windrowed materials would be dragged and spread over the pipeline right-of-way following seeding, to prevent vehicular use.

GEOLOGY AND MINERALS

Affected Environment: Riata's wells are located in the area identified in the RMP as available for oil shale leasing and development. These wells will develop federal oil and gas leases COC-60755, COC- 60757, and COC-60756. The surface geologic formation of the well location is Uinta and Riata's targeted zone is in the lower Mesaverde. During drilling potential water, oil shale, and gas zones will be encountered from surface to the targeted zone. Aquifers that will be encountered during drilling are; the Perched in the Uinta, the A-groove, B-groove and the Dissolution Surface in the Green River formation. These areas along with the upper portion of the Wasatch formation are known for difficulties in drilling and cementing. Sodium resources are also found in the Green River formation however the identified nahcolite zone is located east of these well locations.

Environmental Consequences of the Proposed Action: Drilling and completion of these wells may adversely affect the aquifers if there is loss of circulation or problems cementing the casing. However, the approved cementing and completion procedure of the proposed action

isolates the formations and will prevent the migration of gas, water, and oil between formations. Development of these wells will deplete the hydrocarbon resources in the targeted formation. Well locations may prevent an orderly future development of oil shale resources.

Environmental Consequences of the No Action Alternative: The natural gas resources in the targeted zones will not be developed at this time.

Mitigation: None

PALEONTOLOGY

Affected Environment: The proposed well pads, access roads, natural gas pipelines and compressor facilities are in an area mapped as the Uinta Formation (Tweto 1979) which the BLM has classified as a Category I formation meaning it is a known producer of scientifically important fossil resources.

Environmental Consequences of the Proposed Action: If it should become necessary to excavate into the underlying bedrock formation to construct access roads, level well pads, excavate reserve/blooie pits or bury the pipelines there is a potential to adversely impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to fossil resources under the No Action Alternative.

Mitigation: 1. A paleontological inventory of all exposed rock outcrops shall be required with a report detailing the results of the inventory and any recommended mitigation measures shall be submitted to the BLM prior to the initiation of any construction.

2. A paleontological monitor shall be required any time it becomes necessary to excavate into the underlying bedrock formation construct roads, level well pads, excavate reserve/blooie pits or bury pipelines.

RANGELAND MANAGEMENT

Affected Environment: The proposed action is situated in the Stake Springs pasture of the Reagle (06026) allotment. This pasture is used on a rotational basis in the spring (5/1- 6/15)and fall (10/1-10/30) by cattle of the Mautz and Mantle operations on this allotment.

Environmental Consequences of the Proposed Action: The principal impact of the proposed action on livestock operations will be the physical and temporal disturbance associated with traffic and pipeline construction. If dust mitigation is applied, there will be no significant negative impact on the permitted livestock operations.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: To reduce airborne dust the operator will be required to either surface(with magnesium chloride or similar material) the access roads *or* periodically water them as directed by the Field Manager in order to reduce or eliminate negative impacts to vegetation and its usefulness to herbivores.

REALTY AUTHORIZATIONS

Affected Environment: The proposed pipeline will cross approximately 5.91 miles of public lands and 3.55 miles of private lands. The route will cross or approach Rio Blanco County Roads 68, 86, and 70 as well as local roads. The proposed plant site will require access from County Road 68. There are linear rights-of-way for power lines and oil & gas pipelines, a communications site, oil & gas facilities, and multiple surface use permits.

Environmental Consequences of the Proposed Action: The pipeline and ancillary plant site will be authorized under COC68206. The construction right-of-way will be 50 feet wide for a total disturbed area of approximately 41.72 acres on public lands. The permanent right-of – way will be reduced to 30 feet wide, except for the negotiated reroute of 25 feet width) for an area of 23.13 acres. The plant site will be authorized for 10 acres, for a total permanent area of 33.12 acres. Access roads to the wells and tie-in pipelines will all be on-lease.

Environmental Consequences of the No Action Alternative: The wells, pipeline, and plant would not be constructed and no authorizations would be needed.

Mitigation: 1.Colorado One Call procedure should be activated before any trenching begins. 2. ROC and Riata should consult with other users to prevent interference with permitted uses.

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The project areas and the surrounding Ryan Gulch area has been delineated a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM recreation setting is typically characterized by a natural appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

Environmental Consequences of the Proposed Action: The public will lose approximately 10 acres of dispersed recreation potential while wells are in operation. The public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If action coincides with hunting seasons (September through November) it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pads and roads, an increase of traffic could be expected increasing the likihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Environmental Consequences of the No Action Alternative: No loss of dispersed recreation potential and no impact to hunting recreationists.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The proposed actions are located within an area with a VRM III Classification. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: Because of the close proximity of the proposed actions to existing roads in the area, the proposed actions would be visible to a casual observer traveling along these existing dirt roads. Primary reasons for travel in the area are for energy development, ranching, hunting, and firewood procurement. Traffic volumes are low except for a short period of time in the fall when big game hunting seasons are open. The proposed actions would not dominate the view of the casual observer. By painting all facilities Juniper Green to either blend with surrounding vegetation or to mimic existing vegetation in the background, the level of change to the characteristic landscape would be moderate and the VRM III classification would be retained.

Environmental Consequences of the No Action Alternative: There would be no additional environmental consequences.

Mitigation: Paint all production, processing, and permanent facilities Juniper Green.

WILD HORSES

Affected Environment: The objective of wild horse management in the Piceance-East Douglas HMA is to "provide a healthy, viable breeding population [of horses] with a diverse age structure."

The pipeline of the proposed action is situated in the Square S Pasture portion of the Piceance-East Douglas wild horse herd management area (HMA). A resident population of wild horses inhabits this pasture, watering at locations on Stake Spring Draw. Horses in the Square S Pasture are isolated from the remainder of the Piceance-East Douglas herd by an allotment boundary fence; a situation that results in Square S Pasture horses relying on limited acreage to meet their biologic needs.

Environmental Consequences of the Proposed Action: The principal impact of the proposed action on wild horse bands will be temporary in nature and will result from disturbance associated with traffic and pipeline construction. Recognition is made that continued oil and gas exploration in this pasture could result in cumulative impacts that negatively affect herd health.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts from oil and gas development were analyzed in the White River Resource Area Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) completed in June 1996. Current development, including the proposed action, has not exceeded the cumulative impacts from the foreseeable development analyzed in the PRMP/FEIS.

REFERENCES CITED:

Conner, Carl E.
2004 Class III Cultural Resources Inventory for Four Proposed Well Locations and Related Short Access in Rio Blanco County, Colorado for Riata Energy, Inc. Grand River Institute, Grand Junction, Colorado.

Conner, Carl E. and Barbara J. Davenport
2004 Class III Cultural Resource Inventory Report for Five Proposed Well Locations and Their Associated Pipeline Routes (8.8 miles) and A Compressor Site in Rio Blanco County, Colorado for Riata Energy, Inc. Grand River Institute, Grand Junction.

Tweto, Odgen
1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Carol Hollowed	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archaeologist	Cultural Resources Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species
Brett Smithers	Wildlife Biologist	Migratory Birds
Brett Smithers	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Bo Brown	Hazmat Collateral	Wastes, Hazardous or Solid
Carol Hollowed	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Brett Smithers	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Carol Hollowed	Hydrologist	Soils
Mark Hafkenschiel	Rangeland Management Specialist	Vegetation
Brett Smithers/Ed Hollowed	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Mark Hafkenschiel	Rangeland Management Specialist	Rangeland Management
Linda L Jones	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources
Valerie Dobrich	Natural Resource Specialist	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2004-198-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve development of the wells, pipelines and processing plant as described in the proposed action, with mitigation measures listed below. This development, with mitigation, is consistent with the decisions in the White River ROD/RMP, and environmental impacts will be minimal.

MITIGATION MEASURES:

1. When Riata/ROC develops the well tie pipeline for the existing well #298-18-1; disturbance should follow the existing road through the site to avoid impacts to any of the historic features of the site. In addition, pipeline construction on the northern 1400 feet, more or less, of the pipeline tie to Questar or CIG should keep the working width as narrow as is possible consistent with safety. All disturbances on the northeast side of the line should be restricted to no more than twelve feet from the new, staked centerline route.

2. Additional mitigation measures are addressed in the proposed action.

3. The operator should be required to collect and properly dispose of any solid wastes generated by the proposed actions.

4. Oil and Gas operations are considered to be a light industrial activity by the Colorado Department of Public Health and Environment. As an industrial discharger, the applicant should be required to obtain a permit authorizing the discharge of stormwater from these sites. The permit requires development of a stormwater management plan showing how BMPs would be used to control runoff and sediment transport.

5. When preparing the site, all suitable topsoil should be stripped from the surface of the location and stockpiled for reclamation for use, once the drilling is completed.

6. All sediment control structures or disposal pits will be designed to contain a 100-year, 6-hour storm event. Storage volumes within these structures will have a design life of 25 years.

7 All activity should cease when soils or road surfaces become saturated to a depth of three inches unless otherwise approved by the Authorized Officer.

8. Applicant should provide vegetation or artificial stabilization of cut and fill slopes in the design process. Establishment of vegetation should be avoided where it inhibits drainage from the road surface or where it restricts safety or maintenance.

9. Applicant should eliminate undesirable berms that retard normal surface runoff.

10. BLM would prefer to have a low water crossing. If Riata chooses to place a culvert in the access road the following mitigation should apply:

- Culverts will be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.

- Approaches to the culvert will be stabilized with fabric /gravel/water bars as needed to reduce erosion.

11. Water bars or dikes should be constructed on all of the rights-of-way, and across the full width of the disturbed area, as directed by the authorized officer.

12. Slopes within the disturbed area should be stabilized by non-vegetative practices designed to hold the soil in place and minimize erosion. Vegetative cover should be reestablished to increase infiltration and provide additional protection from erosion.

13. When erosion is anticipated, sediment barriers should be constructed to slow runoff, allow deposition of sediment, and prevent it from leaving the site. In addition, straining or filtration mechanisms may also contribute to sediment removal from runoff

14. All disturbed areas including the cut and fill slopes not necessary for production should be promptly recontoured and revegetated using the recommended seed mix in the Vegetation section below.

15. All disturbed areas should be promptly revegetated including all cut and fill slopes and topsoil stockpiles with Native Seed mix #3. Seeding rates are PLS (Pure Live Seed) and apply to drill seeding. For broadcast application, double the seeding rate and then harrow to insure seed coverage. The project applicant should be responsible for eradicating cheatgrass and noxious and problem weeds should they occur as a result of the proposed action. The applicant should use materials and methods authorized in advance by the White River Field Manager.

Native Seed Mix # 3 lbs/PLS		
Western wheatgrass (Rosanna)	2	Gravelly 10"-14",
Bluebunch wheatgrass (Secar, Whitmar)	1	Pinyon/Juniper
Thickspike wheatgrass (Critana)	1	Woodland, Stony

Native Seed Mix # 3 lbs/PLS		
Indian ricegrass (Rimrock)	2	Foothills, 147
Needle and thread	1	(Mountain
Fourwing saltbush (Wytana)	1	Mahogany)
Utah sweetvetch	.5	
Alternates: globemallow		

16. Applicant should use seed that is certified and free of noxious weeds. Seed certification tags should be submitted to the Area Manager within 30 days of seeding.

17. Promptly recontour and revegetate all disturbed areas with Native Seed Mix #3 and eradicate all noxious weeds and invasive plants using materials and methods approved in advance by the authorized officer.

18. Areas of old-growth pinyon and juniper were identified within the project area during on-site surveys. To avoid potential impacts to species generally associated with mature pinyon-juniper woodlands, a 0.65 mile section of pipeline would be relocated to the east of the proposed route and the cleared right-of-way width narrowed not to exceed 25 feet. In addition, where identified during on-sites and when possible, mature pinyon and juniper trees would be avoided during construction activities.

19. To deter subsequent vehicle use of ROWs and minimize development of new roads and trails consistent with White River ROD/RMP land use decisions (ROD page 2-29), and after reclamation seeding has been finalized, woody material from trees cleared from the ROW should be evenly redistributed across that portion of the ROW adjacent to or that bisects woodland reaches. This is particularly relevant to the ridgeline in the SW ¼ of section 22 (T2S R99W) and those descents into Ryan Gulch (NW¼ section 26 T2S R99W and SE ¼ section 18 T2S R98W) and Right Fork Stake Springs Draw (NW ¼ section 21 T2S R99W). Woody material should also be placed along the processed gas pipeline as a means of effectively deterring subsequent vehicular use along the ROW in that portion of the sagebrush park in the northeast quarter of section 27, T2S, R99W.

20. Reclamation activities should include using available soil material to back-fill cut slopes. Disturbed areas would be seeded with the approved mix of perennial and annual forbs and grasses. Location of production facilities would promote interim reclamation.

21. The compressor fans should be oriented to the east or north to reduce potential impacts to deer and elk as a result of displacement due to noise disturbance.

22. Because the proposed action is scheduled to take place during the months of December through April in an area not regularly occupied by deer and elk during these timeframes, the application of timing limitations are not warranted.

23. The operator should have two options for treatment of slash from the 299-27-4 location. A hydro-ax or other mulching type machine could be used to remove the trees. The machines are capable of shredding trees up to 12" in diameter and 15' tall as well as mowing brush like a conventional brush beater. It generally leaves small branches and pieces of wood from pencil

size up to bowling ball size. The mulch is evenly scattered across the surface and the tires or tracks distribute the weight of the equipment. These would effectively breakdown the woody fuel and scatter the debris thereby eliminating any hazardous fuel load adjacent to the new road and well pad. The other option would be to cut trees and have them removed for firewood, posts, or other products. The branches and tops should be lopped and scattered to a depth of 24 inches or less. If the products are left for collection by the general public, they should be stacked in small manageable piles along the roadside or pad to facilitate removal.

24. For the pipeline route, windrowed materials should be dragged and spread over the pipeline right-of-way following seeding, to prevent vehicular use. This would prevent accumulation of fuels which would create a fuels hazard.

25. Location 299-27-4 should be cleared as specified in the Fire Management section.

26. A paleontological inventory of all exposed rock outcrops should be required with a report detailing the results of the inventory and any recommended mitigation measures should be submitted to the BLM prior to the initiation of any construction.

27. A paleontological monitor should be required any time it becomes necessary to excavate into the underlying bedrock formation construct roads, level well pads, excavate reserve/blooie pits or bury pipelines.

28. To reduce airborne dust the operator should be required to either surface (with magnesium chloride or similar material) the access roads or periodically water them as directed by the Field Manager in order to reduce or eliminate negative impacts to vegetation and its usefulness to herbivores.

29. Colorado One Call procedure should be activated before any trenching begins.

30. ROC and Riata should consult with other users to prevent interference with permitted uses.

31. Paint on all production, processing, and permanent facilities should be Juniper Green.

COMPLIANCE/MONITORING: Pipeline ROW will be monitored by the realty staff on a 5-year interval.

NAME OF PREPARER: Tamara Meagley 12-09-2004 and Linda Jones 12-10-2004

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Field Manager

DATE SIGNED: 12/10/04

ATTACHMENTS: Location map of the proposed action.

Location of Proposed Action
CO-110-2004-198-EA